

CLAIM AMENDMENTS

1. (Currently Amended) A skin patch comprising:

a first layer of material, the first layer having first and second opposite main faces and the first main face having a coating of skin-compatible adhesive material,

a second layer of material, the second layer having first and second opposite main faces and the first main face of the second layer being in confronting relationship with the second main face of the first layer, and

a telesensor for emitting a signal that represents a physiological parameter sensed by the telesensor, the telesensor being sandwiched between the first and second layers,

and wherein the first and second layers are permeable to water vapor.

2. (Original) A skin patch according to claim 1, wherein the first layer is a flexible circuit substrate of electrically insulating material and the telesensor is attached to the flexible circuit substrate.

3. (Original) A skin patch according to claim 2, wherein the flexible circuit substrate is formed with through holes spaced from the telesensor.

4. (Original) A skin patch according to claim 3, wherein the telesensor includes at least one electrical component attached to the flexible circuit substrate, and wherein the holes are spaced from said electrical component.

5. (Original) A skin patch according to claim 1, wherein the telesensor is a temperature sensor that includes an astable multivibrator incorporating a thermistor, the astable multivibrator generating a square wave output signal having a duty cycle that depends on the temperature of the thermistor, and the temperature sensor further comprises a microcontroller that

receives the output signal of the multivibrator and generates said temperature signal.

6. (Original) A skin patch according to claim 5, wherein the temperature sensor further includes a radio transmitter connected to the microcontroller for receiving the temperature signal and encoding a carrier signal with the temperature signal, and an antenna for radiating the encoded carrier signal.

7. (Original) A skin patch according to claim 6, wherein the temperature sensor includes a means for encoding the carrier signal with identifying information.

8. (Original) A skin patch according to claim 1, including a flexible circuit substrate having first and second opposite main faces, the first main face of the flexible circuit substrate being in confronting relationship with the second main face of said first layer and the second main face of the flexible circuit substrate being in confronting relationship with the first main face of the second layer, and wherein the telesensor is attached to the flexible circuit substrate at the second main face thereof.

9. (Original) A skin patch according to claim 1, wherein the second layer is a conformal coating over the telesensor.

10. (Currently Amended) A skin patch according to claim 1, wherein the second layer ~~is made of a material that~~ is permeable to water vapor at its first face and is impermeable to liquid water at its second face.

11. (Original) A skin patch according to claim 10, further comprising a conformal coating of electrically insulating and water impermeable material over the telesensor.

12. (Original) A skin patch according to claim 10, wherein the telesensor is a temperature sensor and the second layer is made of a thermally insulating material.

13-15 (Canceled)

16. (New) A skin patch comprising:

a perforated flexible circuit substrate having first and second opposite main faces and the first main face having a coating of skin-compatible adhesive material,

a layer of material having a moisture vapor transmission rate of at least 425 g/m^2 per 24 hours, said layer having first and second opposite main faces and the first main face of said layer being in confronting relationship with the second main face of the flexible circuit substrate, and

a telesensor for emitting a signal that represents a physiological parameter sensed by the telesensor, the telesensor being attached to the flexible circuit substrate and covered by said layer.

17. (New) A skin patch according to claim 16, wherein the telesensor includes at least one electrical component attached to the flexible circuit substrate and the perforations in the flexible circuit substrate are spaced from said electrical component.

18. (New) A skin patch according to claim 16, wherein the telesensor includes at least one electrical component attached to the flexible circuit substrate and the skin patch further comprises a conformal coating of water impermeable material over the electrical component.

19. (New) A skin patch according to claim 16, wherein said layer is permeable to water vapor at its first face and is impermeable to liquid water at its second face.

20. (New) A skin patch according to claim 16, further comprising a conformal coating of electrically insulating and water impermeable material over the telesensor.

21. (New) A skin patch comprising:

a first layer of material, the first layer having first and second opposite main faces and the first main face having a coating of skin-compatible adhesive material,

a second layer of material, the second layer having first and second opposite main faces and the first main face of the second layer being in confronting relationship with the second main face of the first layer,

a perforated flexible circuit substrate having first and second opposite main faces, the first main face of the flexible circuit substrate being in confronting relationship with the second main face of said first layer and the second main face of the flexible circuit substrate being in confronting relationship with the first main face of the second layer, and

a telesensor for emitting a signal that represents a physiological parameter sensed by the telesensor, the telesensor being attached to the flexible circuit substrate at the second main face thereof,

and wherein the first and second layers are permeable to water vapor.

22. (New) A skin patch according to claim 21, wherein the telesensor includes at least one electrical component attached to the flexible circuit substrate and the perforations in the flexible circuit substrate are spaced from said electrical component.

23. (New) A skin patch according to claim 21, wherein the telesensor includes at least one electrical component attached to the flexible circuit substrate and the skin patch further

comprises a conformal coating of water impermeable material over the electrical component.

24. (New) A skin patch according to claim 21, wherein the second layer is made of a material that is permeable to water vapor at its first face and is impermeable to liquid water at its second face.

25. (New) A skin patch according to claim 21, further comprising a conformal coating of electrically insulating and water impermeable material over the telesensor.

26. (New) A skin patch according to claim 21, wherein the first and second layers each have a moisture vapor transmission rate of at least 425 g/m^2 per 24 hours.